

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 79-142

NPDES NO. CA0037711

WASTE DISCHARGE REQUIREMENTS FOR:

SOUTHERN MARIN SUBREGIONAL SEWERAGE AGENCY ALSO  
KNOWN AS SEWERAGE AGENCY OF SOUTHERN MARIN,  
ALMONTE SANITARY DISTRICT, ALTO SANITARY DISTRICT,  
CITY OF MILL VALLEY, HOMESTEAD VALLEY SANITARY  
DISTRICT, RICHARDSON BAY SANITARY DISTRICT, AND  
TAMALPAIS COMMUNITY SERVICES DISTRICT, MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region,  
(hereinafter Board) finds that:

1. Southern Marin Subregional Sewerage Agency is also known as Sewerage Agency of Southern Marin.
2. City of Mill Valley and Southern Marin Subregional Sewerage Agency (hereinafter dischargers) have applied for waste discharge requirements and a permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES) by application dated **October 4, 1979.**
3. Almonte Sanitary District, Alto Sanitary District, City of Mill Valley, Homestead Valley Sanitary District, Richardson Bay Sanitary District and Tamalpais Community Services District (hereinafter sewerage entities) have entered into a joint powers agreement with Southern Marin Subregional Sewerage Agency (SMSSA). Pursuant to the agreement:
  - a. SMSSA assumes responsibility for treatment, transport of treatment plant effluent and disposal of waste from the sewerage entities.
  - b. City of Mill Valley will continue to operate the sewage treatment plant until some future date when SMSSA takes over the operation. Until that date, City of Mill Valley, in addition to SMSSA, will be responsible for the treatment and disposal of waste from the sewerage entities.
4. The dischargers, presently, discharge municipal wastewater through an outfall to shallow water at the northwest end of Richardson Bay (122° 31' 24" latitude and 37° 54' 42" longitude).
5. The dischargers describe the existing discharge as follows:
  - a. The dischargers treat sewage from Almonte Sanitary District, Alto Sanitary District, City of Mill Valley, Homestead Valley Sanitary District and Kay Park Sewer Maintenance District.

- b. Average annual flow is 1.5 million gallons per day (mgd).

The sewage receives secondary treatment.

<u>Constituents</u>	<u>Milligrams per liter (mg/l)</u>	<u>Pounds per day</u>
BOD	16	200
Suspended Solids	17	213

- c. In wet weather, untreated sewage overflows manholes or bypasses to Richardson Bay and its tributaries from the sewer service areas and treatment plant.
6. A Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for Richardson Bay.
7. The beneficial uses of Richardson Bay are:
- a. Water contact recreation including wading, swimming, and water skiing;
  - b. Non-contact water recreation including picnicking, hiking, marine life study, bird watching, esthetic enjoyment, pleasure boating and marinas;
  - c. Commercial and sport fishing;
  - d. Wildlife habitat;
  - e. Preservation of habitat for rare and endangered species;
  - f. Marine habitat;
  - g. Fish migration;
  - h. Fish Spawning;
  - i. Shellfish and herring egg harvesting; and
  - j. Navigation.
8. The Basin Plan prohibits the discharge of wastewater:
- a. To Richardson Bay unless the discharge is bayward of Sausalito and Peninsula Points; and
  - b. To waters with less than 10:1 initial dilution.
9. The Basin Plan prohibits discharge of all conservative toxic and deleterious substances above those levels, which can be achieved by source control, to waters of the Basin.

10. The waste discharge is covered by the following orders:
  - a. Order No. 71-13 adopted on February 25, 1971;
  - b. Order No. 74-207 adopted on December 17, 1974;
  - c. Order No. 76-40 adopted on May 4, 1976
  - d. Order No. 77-86 adopted on June 21, 1977;
  - e. Order No. 77-90 adopted on July 19, 1977;
  - f. Order No. 78-104 adopted on December 19, 1978; and
  - g. Order No. 79-104 adopted on August 21, 1979.
11. The dischargers propose the following:
  - a. Tamalpais Community Services District will annex Kay Park Sewer Maintenance District but continue to have sewage from that area treated at the dischargers' plant.
  - b. The dischargers will treat and dispose of sewage from Almonte Sanitary District, Alto Sanitary District, City of Mill Valley, Homestead Valley Sanitary District, and portions of Richardson Bay Sanitary District and Tamalpais Community Services District.
  - c. Treatment plant will be rebuilt to handle an average dry weather design flow of 2.55 mgd.
  - d. A new transport pipeline and outfall will be built to discharge the treated waste into Raccoon Strait at a dilution of at least 10:1.
  - e. The corrections necessary to eliminate wet weather sewage overflow and bypassing from sewer service areas and the treatment plant will be made by the dischargers and sewerage entities.
  - f. Sewer use ordinances will be adopted to control the discharge of toxic or industrial waste into sewers in the service areas by the dischargers and sewerage entities.
12. Novato Sanitary District, as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies which include the dischargers and sewerage entities, requested an NPDES Permit time extension for construction of required facilities. This request was pursuant to Section 301(i)(1) of the Federal Water Pollution Control Act (FWPCA), as amended. The Board finds the request warranted and grants the time extension for compliance with Section 301(b) pursuant to Section 301(i) of the Act.
13. Novato Sanitary District as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies certified a final Environmental Impact Report (EIR) on September 17, 1979, for their wastewater management projects in accordance with the California Environmental Quality Act (Public Resources Code, Section 2100 et seq.). The members of this Regional Board have received and reviewed a summary of these documents.

14. The EIR specifies that this project could have the following adverse impacts on the environment:
  - a. Possible odors from the wastewater treatment plant may affect nearby residents.
  - b. Pipeline construction will disrupt the Mill Valley marsh.
15. Compliance with Standard Provision A.1. of this Order will mitigate adverse impacts of Finding 14.a. To maintain compliance, the dischargers will cover the treatment plant headworks, primary clarifier and sludge dewatering facilities. The trapped exhaust gases will be scrubbed before venting to the atmosphere.
16. The dischargers will manage construction to minimize damage, and return areas to their original elevation and revegetate them to mitigate adverse impacts of Finding 14.b.
17. The Board has notified the dischargers, sewerage entities, and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the dischargers (and where specified, the sewerage entities) shall comply with the following:

A. Prohibitions

1. The dischargers and sewerage entities are prohibited from discharging wastewater into Richardson Bay unless the discharge is bayward of a line drawn between Sausalito and Peninsula Points.
2. The discharge of wastewater at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited (receiving water to wastewater flow).
3. The dischargers and sewerage entities are prohibited from bypassing or overflowing untreated wastewater to waters of the United States, either at the plant or from the collection systems.
4. The average dry weather flow shall not exceed 1.8 mgd with the discharge at its present location, or 2.55 mgd with discharge to Raccoon Strait. Average shall be determined over three consecutive dry weather months each year.

B. Effluent Limitations

1. The chlorine residual of the discharge shall not exceed 0.0 mg/l.
2. Prior to the termination of discharge at its present location, the following interim limitations shall apply to the discharge:

<u>Constituents</u>	<u>Units</u>	<u>30 day Average</u>	<u>Daily Maximum</u>
a. BOD	mg/l	20	40
	lbs/day	1918	8473
	kg/day	870	3843
b. Suspended Solids	mg/l	20	40
	lbs/day	1918	8473
	kg/day	870	3843
c. Settleable Matter	ml/l-hr	0.1	0.2
d. Total Coliform			

At some point in the treatment process the waste shall not exceed a median MPN of coliform organisms of 23/100 ml as determined from the results of the previous 7 analyses.

- e. The survival of an acceptable test organism in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.
- f. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
3. The discharge of an effluent to transport pipeline to Raccoon Strait containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>7-day Average</u>	<u>Daily Maximum</u>
a. BOD	mg/l	30	45	60
	lbs/day	2877	-	12,710
	kg/day	1305	-	5,765
b. Suspended Solids	mg/l	30	45	60
	lbs/day	2877	-	12,710
	kg/day	1305	-	5,765
c. Oil & Grease	mg/l	10	-	20
	lbs/day	959	-	4,237
	kg/day	435	-	1,922
d. Settleable Solids	ml/l/hr	0.1	-	0.2

- e. The survival of an acceptable test organism in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50 percent survival.
- f. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
4. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged to transport pipeline to Raccoon Strait that are collected in a period of 30 consecutive calendar days, shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).
5. Representative samples of effluent discharged through the present outfall or to the transport pipeline to Raccoon Strait shall not exceed the following limits more than the percentage of time indicated:<sup>(1)</sup>

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
a. Arsenic	mg/l (kg/day)	0.01 (0.096)	0.02 (0.193)
b. Cadmium	mg/l (kg/day)	0.02 (0.193)	0.03 (0.289)
c. Total Chromium	mg/l (kg/day)	0.005 (0.043)	0.01 (0.096)
d. Copper	mg/l (kg/day)	0.2 (1.929)	0.3 (2.894)
e. Lead	mg/l (kg/day)	0.1 (0.965)	0.2 (1.929)
f. Mercury	mg/l (kg/day)	0.001 (0.010)	0.002 (0.019)
g. Nickel	mg/l (kg/day)	0.1 (0.965)	0.2 (1.929)
h. Silver	mg/l (kg/day)	0.02 (0.193)	0.04 (0.386)
i. Zinc	mg/l (kg/day)	0.3 (2.894)	0.5 (4.823)
j. Cyanide	mg/l (kg/day)	0.1 (0.965)	0.2 (1.929)
k. Phenolic Compounds	mg/l (kg/day)	0.5 (4.823)	1.0 (9.647)
l. Total Identifiable Chlorinated Hydrocarbons <sup>(2)</sup>	mg/l (kg/day)	0.002 (0.019)	0.004 (0.039)

- (1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.
- (2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.
6. The waste as discharged to Raccoon Strait or at some place in the treatment process shall meet the following limits of quality:

The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 milliliters when verified by a repeat sample taken within 48 hours.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved oxygen      5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved sulfide      0.1 mg/l maximum.
  - c. pH      Variation from natural ambient pH by more than 0.2 pH units.
  - d. Un-ionized Ammonia      0.025 mg/l annual median  
as N      0.4 mg/l maximum
  - e. Nutrients      50 µg/l chlorophyll a maximum. When background levels exceed this requirement, then this discharge shall not add further nutrients.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The dischargers shall comply with the following time schedule to achieve compliance with Prohibitions A.1 and A.2; Effluent Limitations B.3, B.4, B.5.c, and B.6; and Receiving Water Limitations C.1.a, C.1.c, C.1.e, C.2.c, C.2.d, and C.2.e.

<u>Task</u>	<u>Completion Date</u>
a. Receive Concept Approval and Step 2 Grant Approval	October 24, 1979
b. Authorize Step 2 Engineering and Revenue Program	November 15, 1979
c. Begin Design	December 1, 1979
d. Submit Design to SWRCB for 10% Review	February 15, 1980
e. Authorize Bond Counsel to Proceed	March 1, 1980
f. File for Bond Election	April 1, 1980
g. Submit Plans to SWRCB for 50% Design Review and Complete Revenue Program and Land Appraisal	June 1, 1980
h. Hold Bond Election	June 15, 1980
i. Submit Completed Plans and Specs. of all Facilities Necessary to Achieve Compliance, and Draft O&M Manual to the SWRCB for Approval	November 1, 1980
j. Advertise for Bids on the Bonds	November 1, 1980
k. Receive Approval from SWRCB to call for Construction Bids	December 15, 1980
l. Receive Bond Bids	January 1, 1981
m. Advertise for Construction Bids	January 1, 1981



<u>Task</u>	<u>Completion Date</u>
n. Receive Construction Bids, Submit Bids to SWRCB for Approval	February 15, 1981
o. Receive Approval from SWRCB to Award Construction Contract	April 1, 1981
p. Begin Construction	May 1, 1981
q. Complete Construction	May 1, 1983
r. Full Compliance	July 1, 1983

2. The dischargers and sewerage entities shall comply with the following time schedule to achieve compliance with Prohibition A.3.

<u>Task</u>	<u>Completion Date</u>
a. Complete investigations necessary to determine cause and corrections needed to prevent the wet weather sewer flows from causing overflow or bypassing.	February 1, 1981
b. Submit description of actions necessary to achieve compliance and schedule of their completion dates	March 15, 1981
c. Document availability of funding for corrective actions	June 15, 1981
d. Full compliance	June 15, 1983

3. The dischargers and sewerage entities shall comply with the following time schedule to achieve compliance with Prohibition A.3. in the Greenwood Beach area of Richardson Bay Sanitary District:

<u>Task</u>	<u>Completion Date</u>
a. Begin design of facilities necessary to achieve compliance	December 1, 1979
b. Complete design	April 1, 1980
c. Obtain construction funding	July 1, 1980
d. Begin construction	July 1, 1980
e. Complete construction	January 1, 1981
f. Full compliance	February 1, 1981

4. The dischargers and sewerage entities shall comply with the following time schedule to achieve compliance with Effluent Limitations B.2.e, B.3.e, and B.5; and Receiving Water Limitation C.1.e.

<u>Task</u>	<u>Completion Date</u>
a. Complete all tests necessary and determine the cause of excessive toxicity (less than 50% survival of test fish) in the sewage treatment plant effluent	
(1) If chlorine or some other substance that should be removed during the treatment is the cause of excessive toxicity, revise plant operations and remove these substances	Forthwith
(2) If methylene blue-active substances or other substances discharged to the sewer by commercial establishment, industry, or an individual is the cause of excessive toxicity, submit schedule of actions to locate and stop the discharge(s)	April 1, 1980
(3) If ammonia is the cause of excessive toxicity submit schedule and describe actions to be taken to abate the ammonia toxicity	April 1, 1980
b. Adopt sewer use ordinances that are acceptable to the Executive Officer for all sewer service areas	January 1, 1982
c. Implement the sewer use ordinances and adopt compliance time schedules for all discharges not in compliance	July 1, 1982
d. Full compliance	July 1, 1983
5. The dischargers are required to provide to the Board by January 15, 1980, and quarterly thereafter, a report on progress toward compliance with Provisions D.1, D.2, D.3, and D.4 of this Order.	
6. This Order supersedes the requirements proscribed in Order Nos. 71-13, 74-207, 76-40, 77-86, 77-90, 78-104 and 79-104. Order Nos. 71-13, 74-207, 76-40, 77-86, 77-90, 78-104, and 79-104 are rescinded.	
7. The dischargers shall review and update their contingency plan annually as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the dischargers have failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.	

8. The dischargers shall comply with a Self-Monitoring Program as ordered by the Executive Officer.
9. The dischargers shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
10. In reviewing compliance with the limits of Effluent Limitation B.4 of this Order, the Board will take special note of the difficulties encountered in achieving compliance during periods of high wet weather flow.
11. This Order expires October 1, 1984. The dischargers must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
12. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **October 16, 1979.**

FRED H. DIERKER  
Executive Officer

Attachment:  
Standard Provisions, Reporting  
Requirements & Definitions (April 1977)